FIG. 1

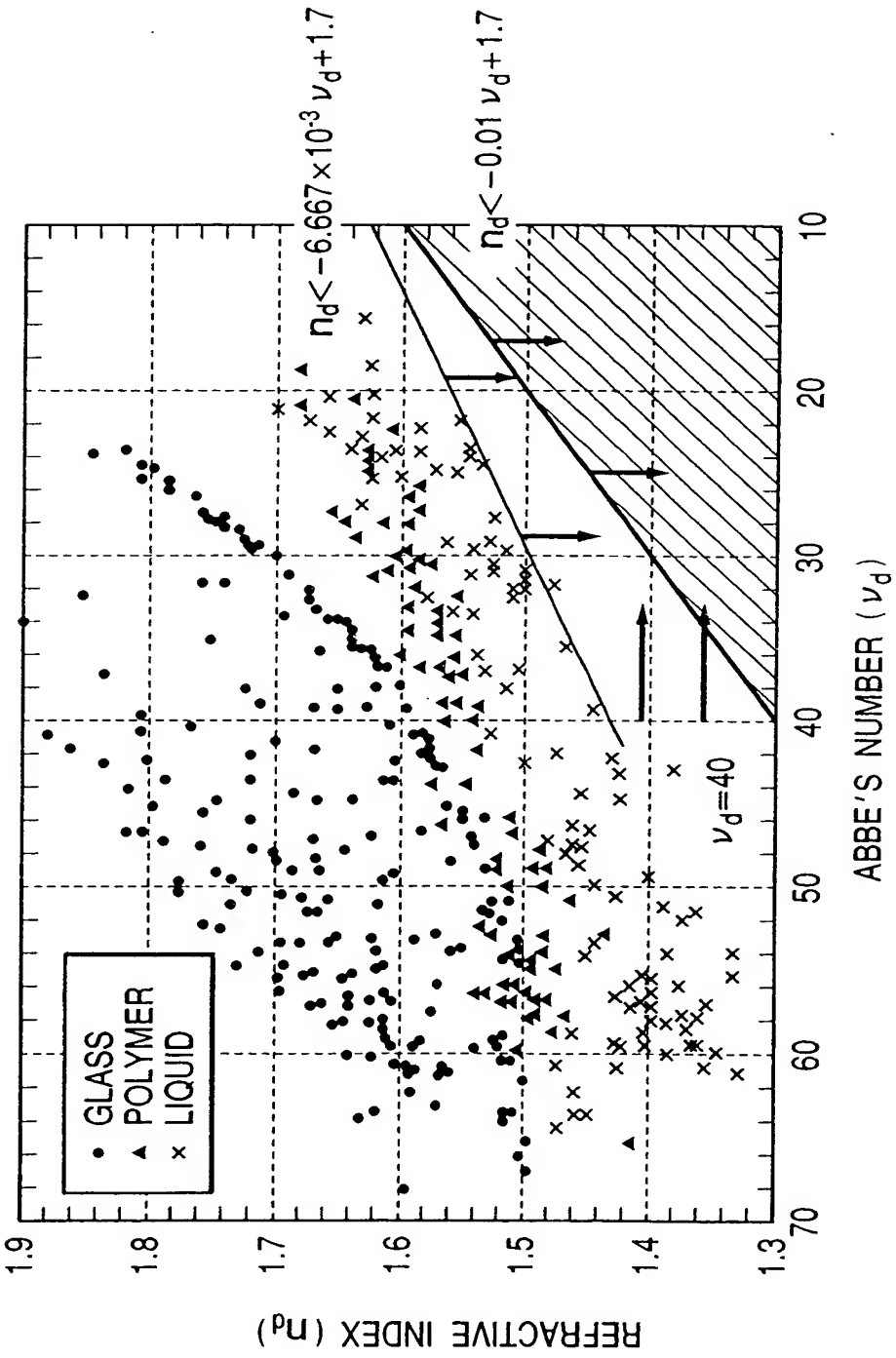

$n_d<-6.667\times10^{-3}\,\nu_d+1.7$
$n_d<-0.01\,\nu_d+1.7$
$\nu_d=40$
GLASS
POLYMER
LIQUID
REFRACTIVE INDEX (n_d)
ABBE'S NUMBER (ν_d)
1.9
1.8
1.7
1.6
1.5
1.4
1.3
70
60
50
40
30
20
10

FIG. 2

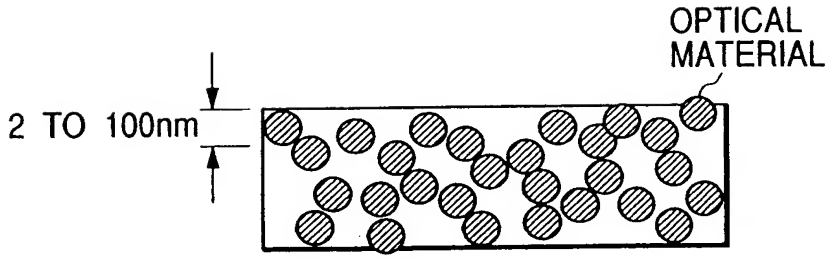


FIG. 3

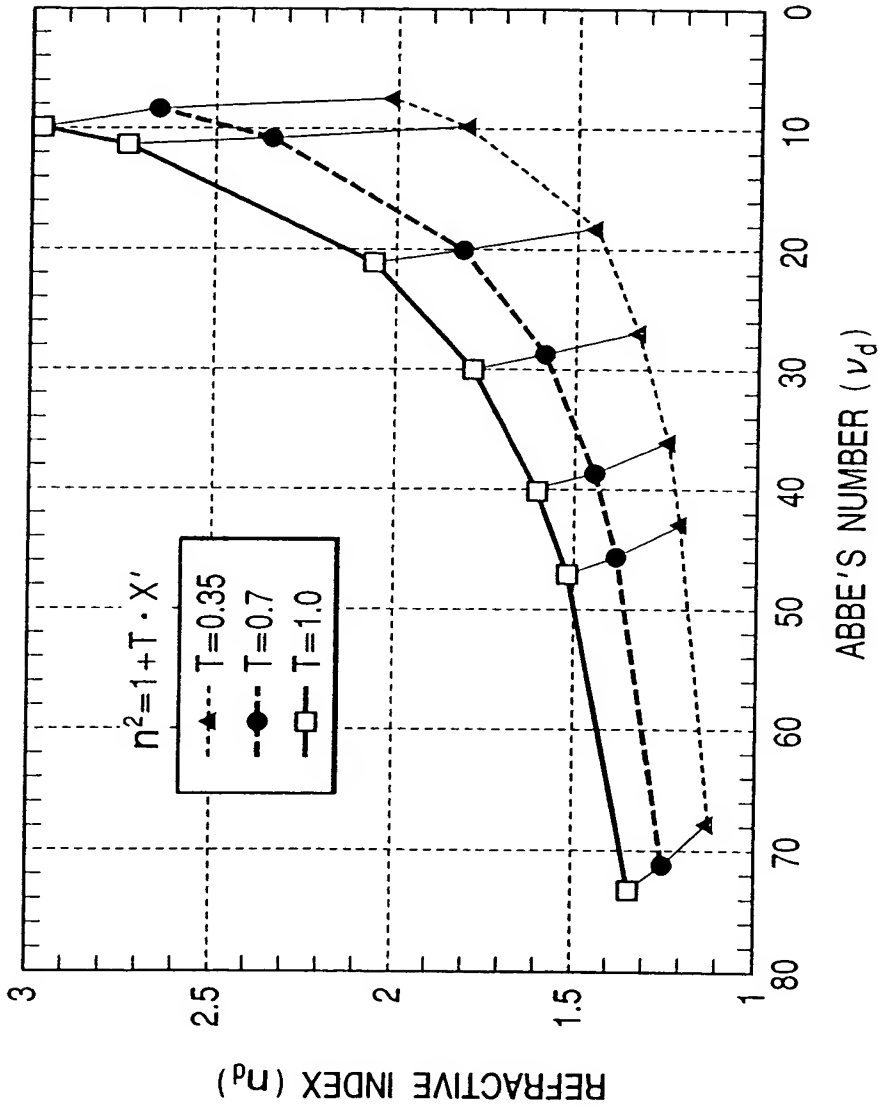

REFRACTIVE INDEX (n_d)
3
2.5
2
1.5
1
ABBE'S NUMBER (ν_d)
0
10
20
30
40
50
60
70
80
$n^2=1+T \cdot X'$
T=0.35
T=0.7
T=1.0

FIG. 4

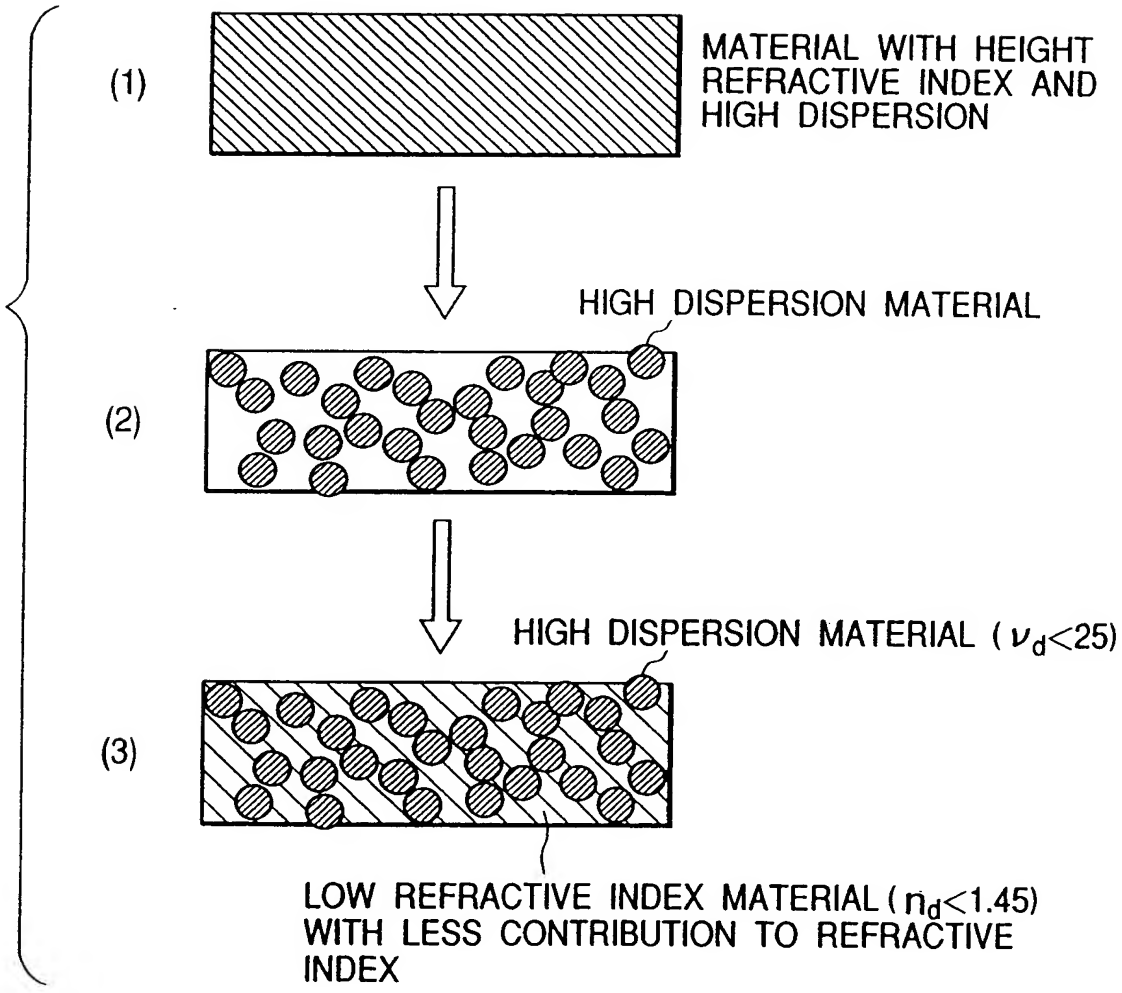

(1)
MATERIAL WITH HEIGHT REFRACTIVE INDEX AND HIGH DISPERSION
HIGH DISPERSION MATERIAL
(2)
HIGH DISPERSION MATERIAL (ν_d<25)
(3)
LOW REFRACTIVE INDEX MATERIAL (n_d<1.45) WITH LESS CONTRIBUTION TO REFRACTIVE INDEX

FIG. 5

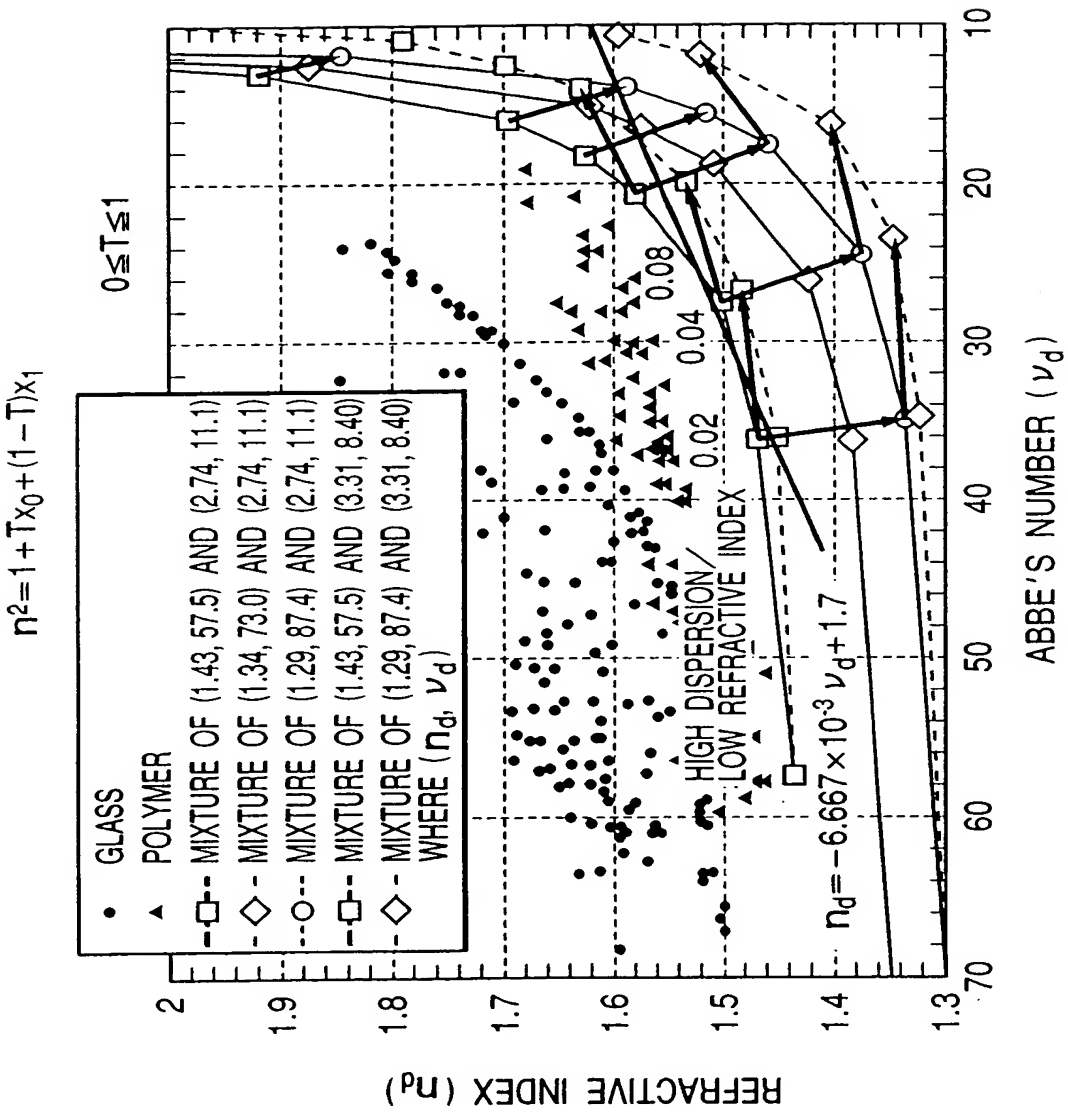

$n^2=1+Tx_0+(1-T)x_1$
$0 \leqq T \leqq 1$
GLASS
POLYMER
MIXTURE OF (1.43, 57.5) AND (2.74, 11.1)
MIXTURE OF (1.34, 73.0) AND (2.74, 11.1)
MIXTURE OF (1.29, 87.4) AND (2.74, 11.1)
MIXTURE OF (1.43, 57.5) AND (3.31, 8.40)
MIXTURE OF (1.29, 87.4) AND (3.31, 8.40)
WHERE (n_d, ν_d)
HIGH DISPERSION/ LOW REFRACTIVE INDEX
$n_d=-6.667\times10^{-3}\,\nu_d+1.7$
0.02
0.04
0.08
REFRACTIVE INDEX (n_d)
ABBE'S NUMBER (ν_d)
2
1.9
1.8
1.7
1.6
1.5
1.4
1.3
70
60
50
40
30
20
10

FIG. 6

TYPE OF MIXTURE

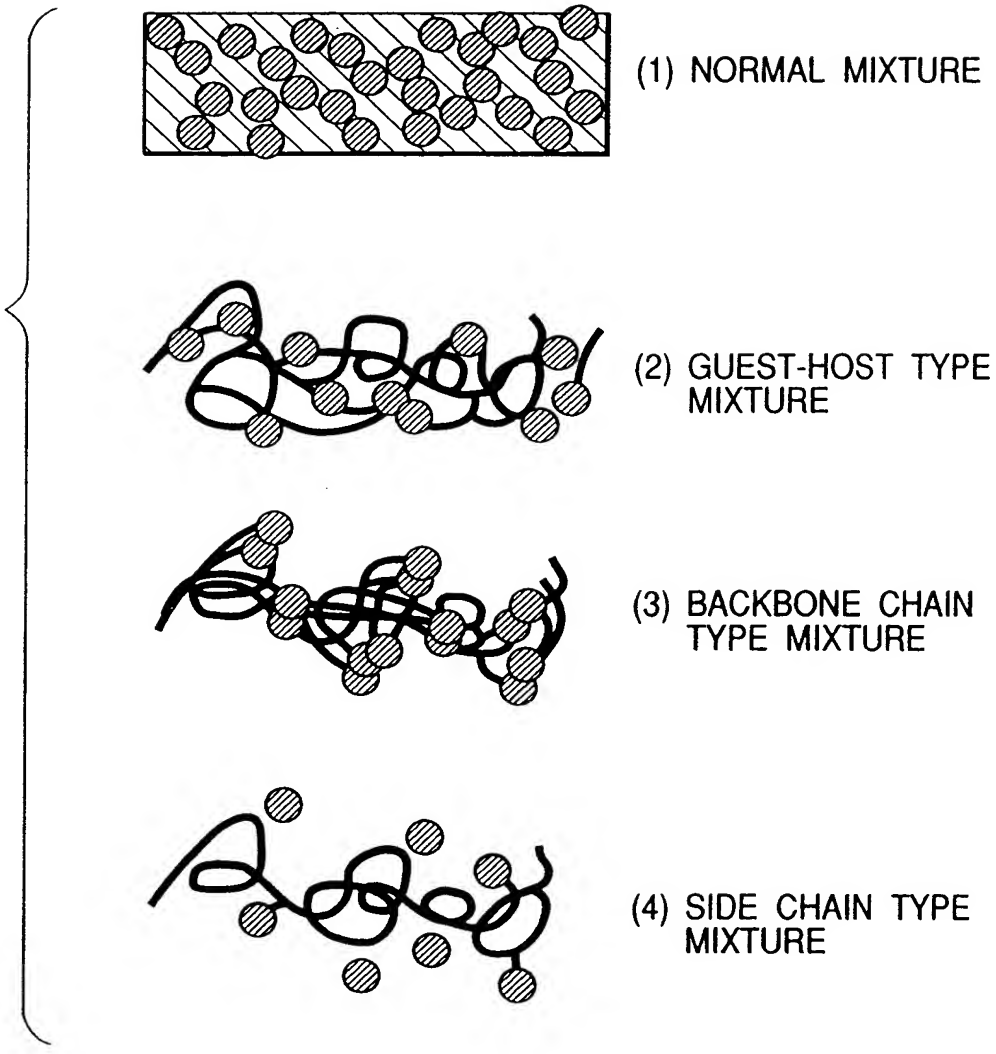


FIG. 7

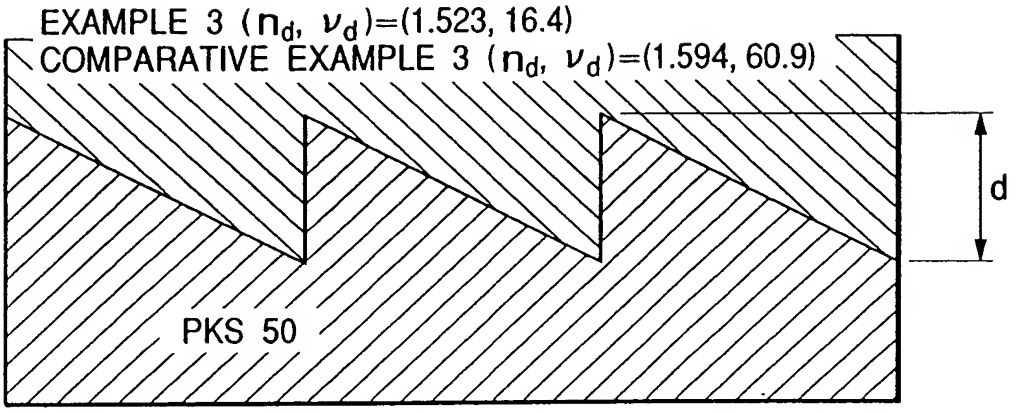

EXAMPLE 3 (n_d, ν_d)=(1.523, 16.4)
COMPARATIVE EXAMPLE 3 (n_d, ν_d)=(1.594, 60.9)
d
PKS 50

FIG. 8

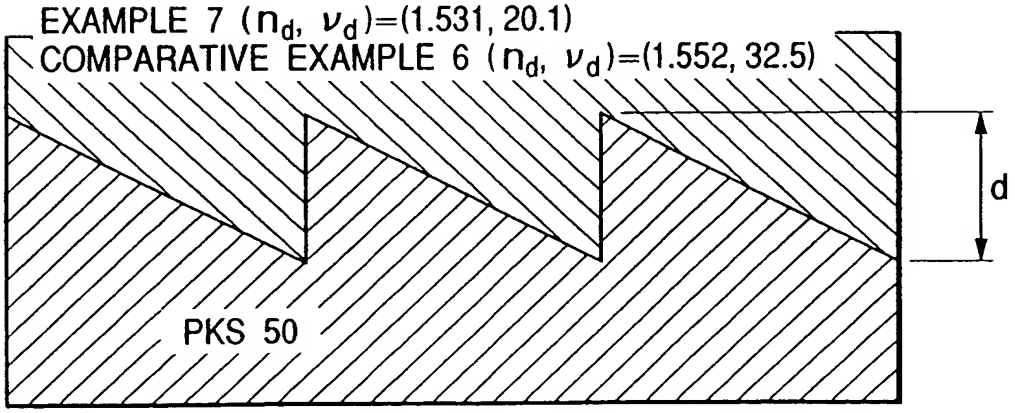

EXAMPLE 7 (n_d, ν_d)=(1.531, 20.1)
COMPARATIVE EXAMPLE 6 (n_d, ν_d)=(1.552, 32.5)
d
PKS 50

FIG. 9

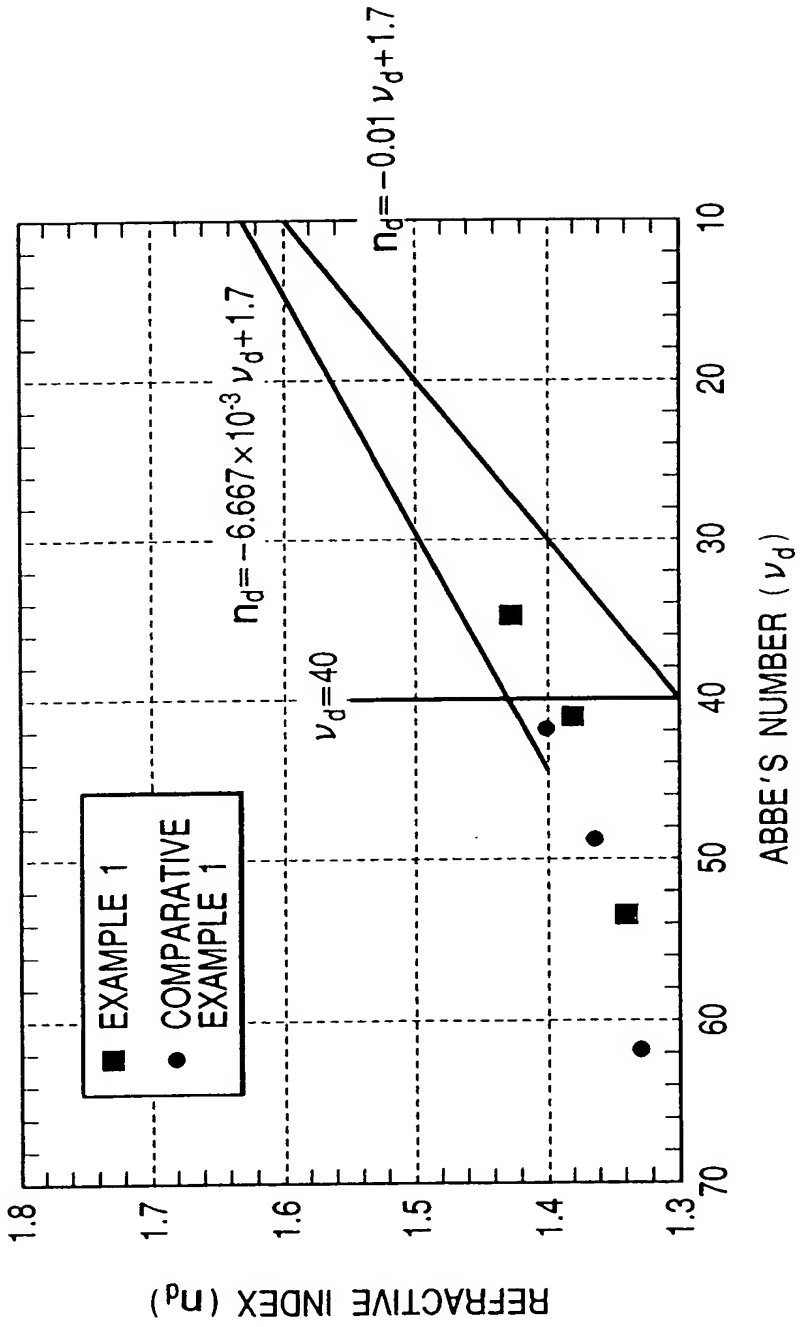

REFRACTIVE INDEX (n_d)
ABBE'S NUMBER (ν_d)
1.8
1.7
1.6
1.5
1.4
1.3
10
20
30
40
50
60
70
$n_d=-0.01\,\nu_d+1.7$
$n_d=-6.667\times10^{-3}\,\nu_d+1.7$
$\nu_d=40$
EXAMPLE 1
COMPARATIVE EXAMPLE 1

FIG. 10

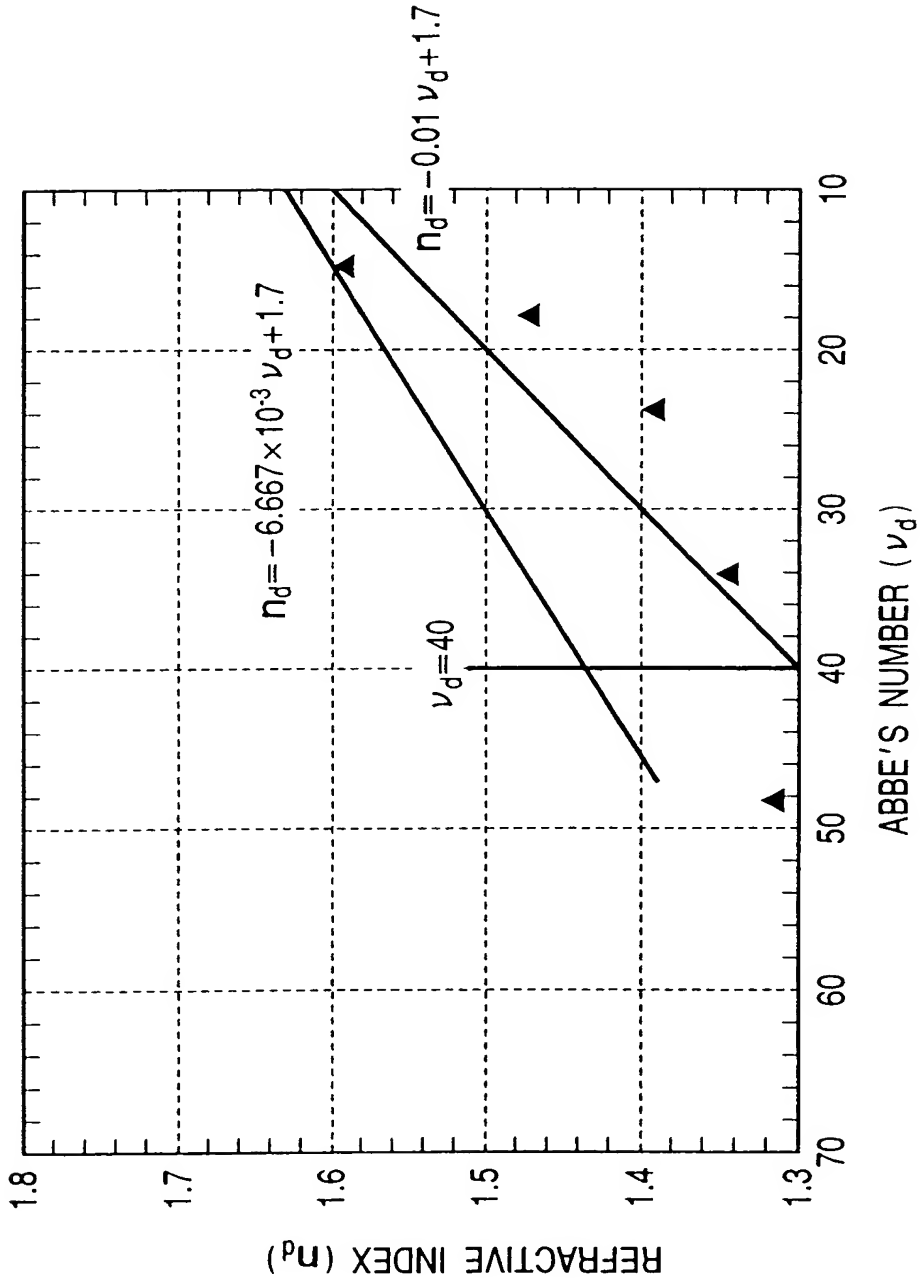

$n_d=-0.01\,\nu_d+1.7$
$n_d=-6.667\times10^{-3}\,\nu_d+1.7$
$\nu_d=40$
1.8
1.7
1.6
1.5
1.4
1.3
10
20
30
40
50
60
70
REFRACTIVE INDEX (n_d)
ABBE'S NUMBER (ν_d)

FIG. 11

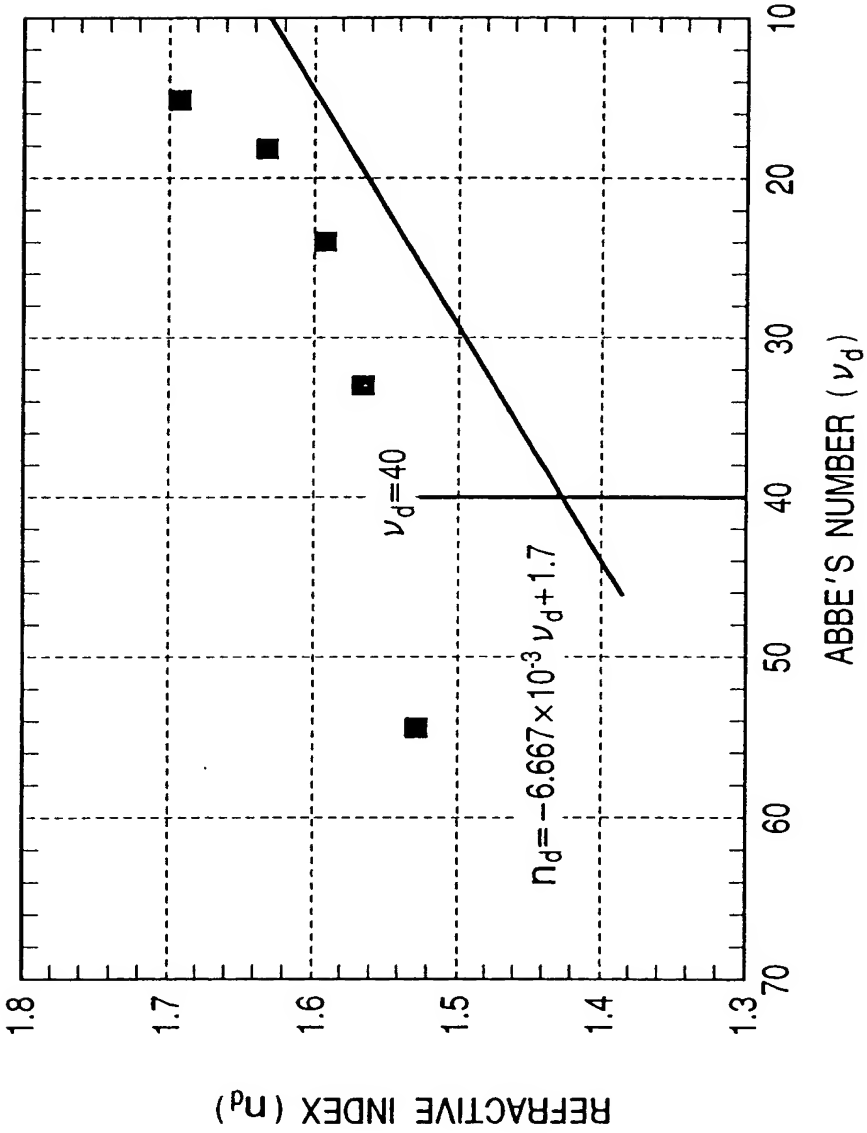

REFRACTIVE INDEX (n_d)
1.8
1.7
1.6
1.5
1.4
1.3
ABBE'S NUMBER (ν_d)
10
20
30
40
50
60
70
ν_d=40
n_d=−6.667×10^{-3} ν_d+1.7

FIG. 12

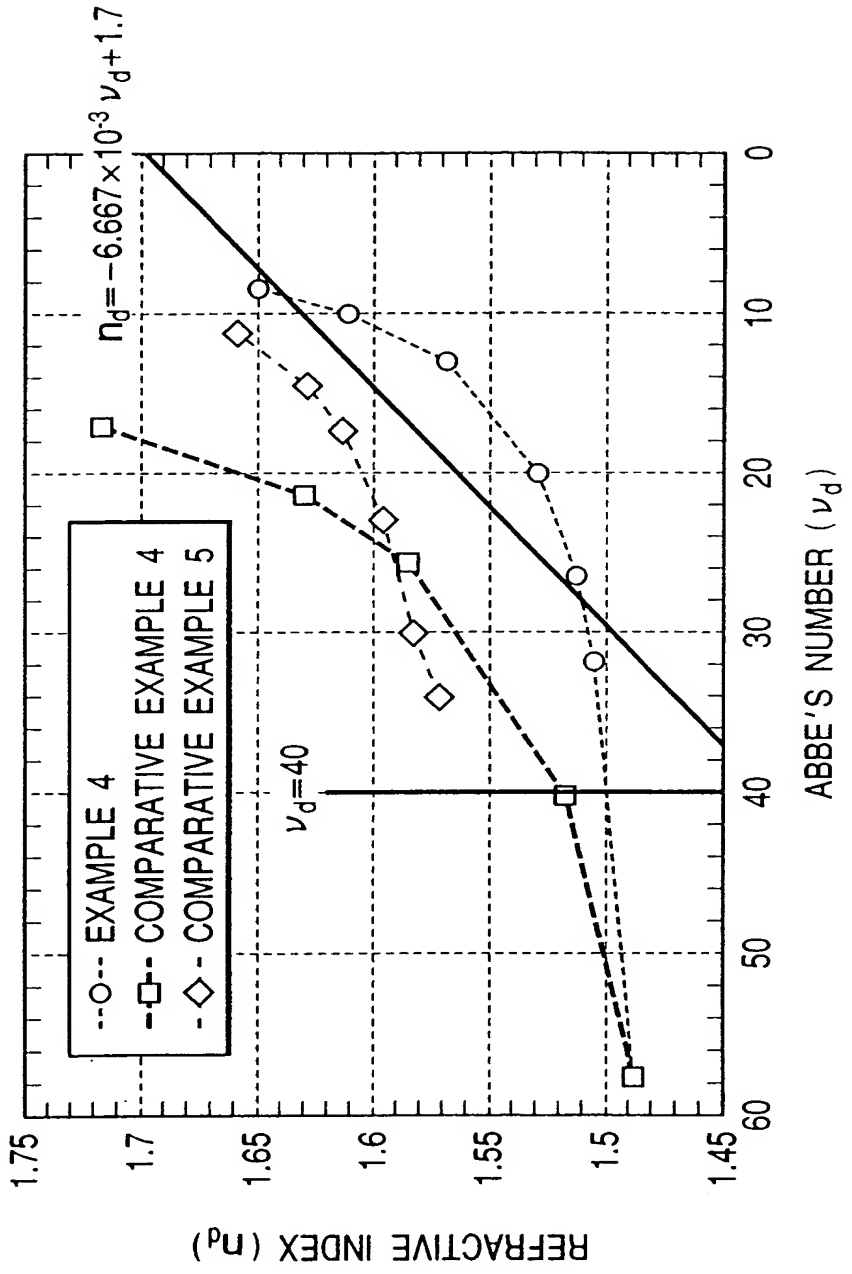

$n_d=-6.667\times10^{-3}\,\nu_d+1.7$
$\nu_d=40$
--○-- EXAMPLE 4
-□- COMPARATIVE EXAMPLE 4
-◇- COMPARATIVE EXAMPLE 5
REFRACTIVE INDEX (n_d)
ABBE'S NUMBER (ν_d)
1.75
1.7
1.65
1.6
1.55
1.5
1.45
0
10
20
30
40
50
60

FIG. 13

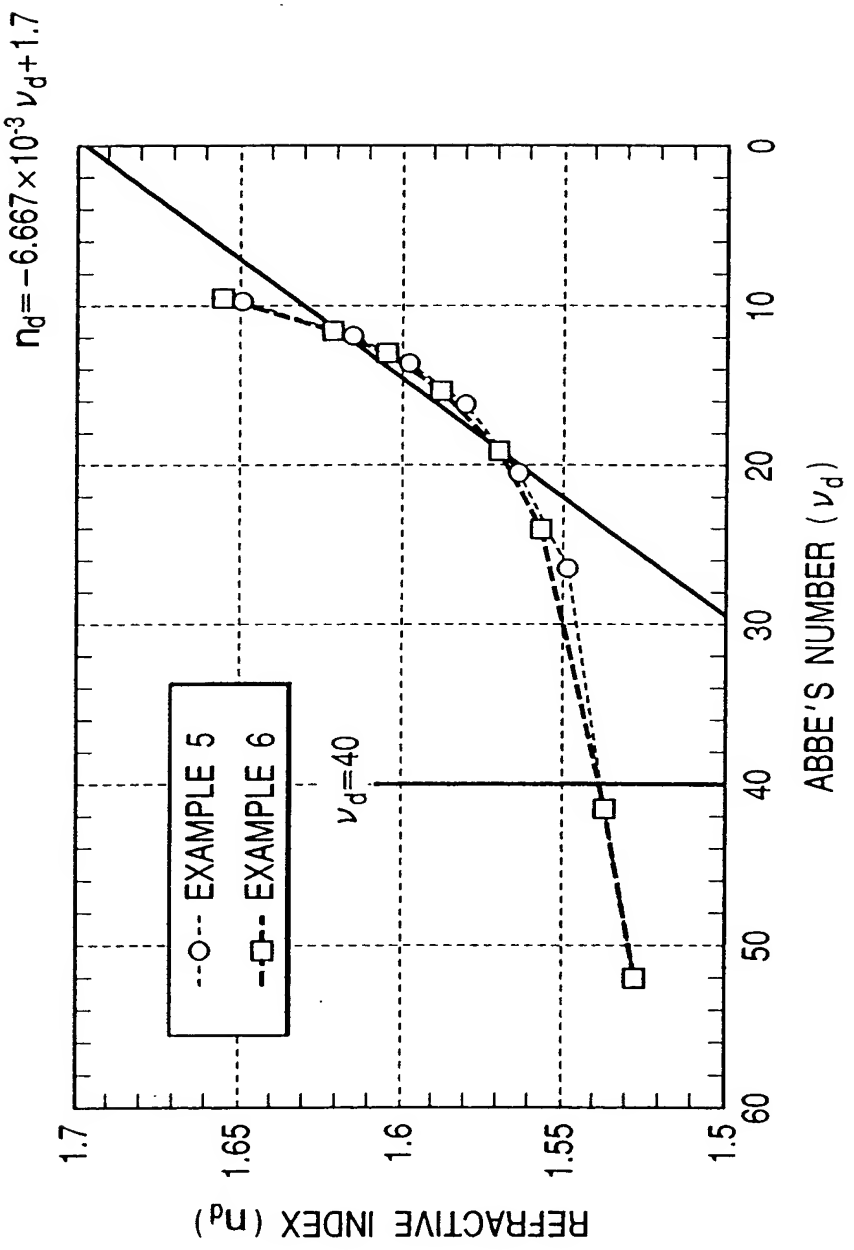
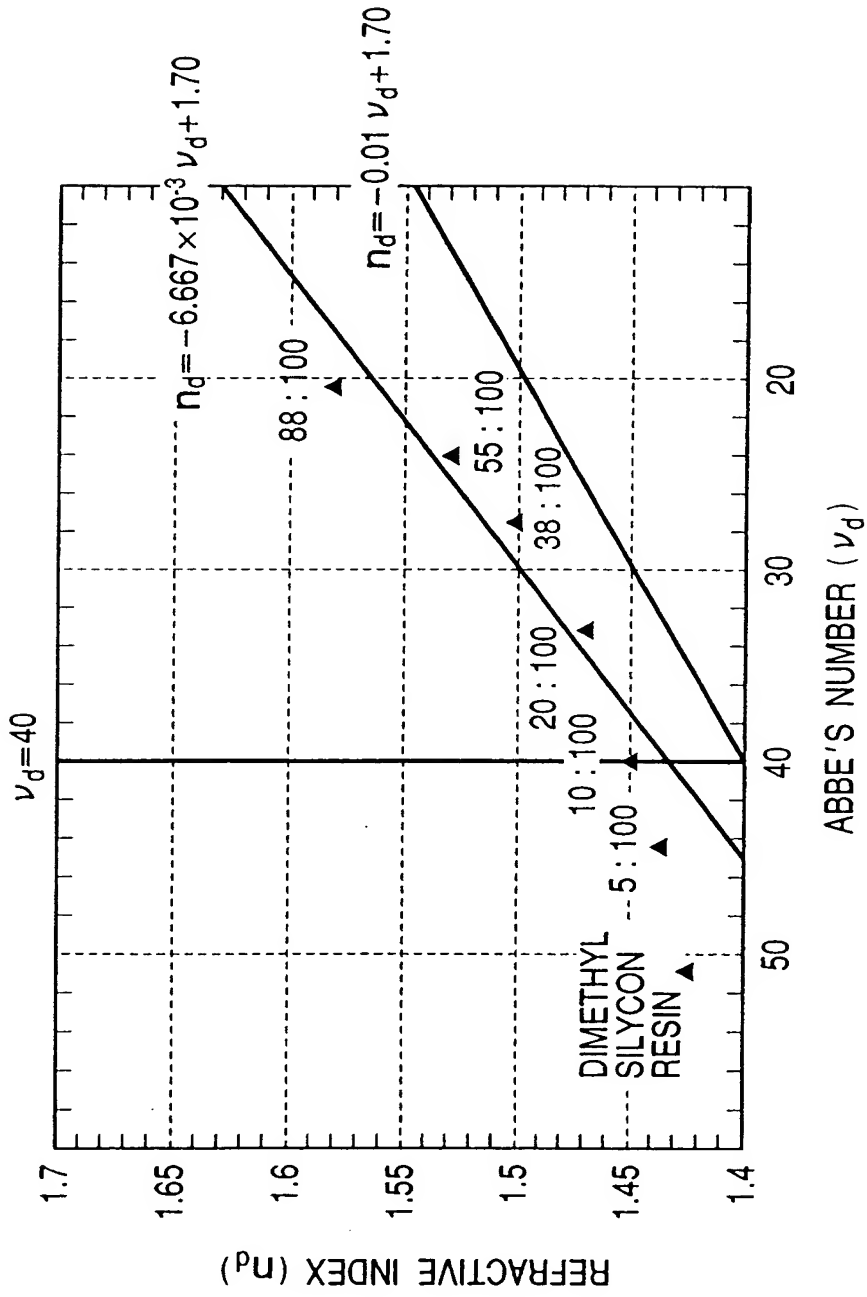

$n_d=-6.667\times10^{-3}\,\nu_d+1.7$
REFRACTIVE INDEX (n_d)
ABBE'S NUMBER (ν_d)
1.7
1.65
1.6
1.55
1.5
0
10
20
30
40
50
60
ν_d=40
--○-- EXAMPLE 5
-□- EXAMPLE 6

FIG. 14


$n_d=-6.667\times10^{-3}\,\nu_d+1.70$
$n_d=-0.01\,\nu_d+1.70$
$\nu_d=40$
88 : 100
55 : 100
38 : 100
20 : 100
10 : 100
5 : 100
DIMETHYL SILYCON RESIN
1.7
1.65
1.6
1.55
1.5
1.45
1.4
50
40
30
20
REFRACTIVE INDEX (n_d)
ABBE'S NUMBER (ν_d)